FPE to relocate facilities

The Department of Fire Protection Engineering relocation project is well on its way to completion. To date, a number of companies have already pledged significant resources to enable the renovation of our new space.

Starting this fall, our new venue will be the third floor of the J.M. Patterson Building, in close proximity to the new Jeong H. Kim Engineering Building. For the first time, all departmental activities will be housed on the same floor! In addition to the FPE facilities, one lecture hall and one high-tech classroom will be available on the floor. Faculty and staff will occupy a suite of 12 offices with ample storage space and a large conference room.

All graduate students will be in a spacious 40-cubicle area adjacent to the faculty offices. Undergraduate students will benefit from a new Alumni Lounge developed solely from the contributions of our alumni. Jenny Nelson has taken the lead in organizing the alumni fundraising campaign. The goal is to create a tangible link between students and alumni and to foster participation and communication among graduates of all generations.

A major laboratory complex will be constructed adjacent to these facilities and encompass a variety of dedicated labs. Our goal is to build several laboratories dedicated to fire protection research. We would like to create a first-class fire science lab with large capacity calorimetric hoods and significant instrumentation support. This facility will amplify research presently conducted in the Potomac Lab. A wet lab will be dedicated to suppression studies with sprinklers, mist, foams and gels. This facility will further enhance the capabilities of the present HTFS lab. A fire diagnostic lab will house the saltwater experiment and similar research projects that are now located in the FETS lab. The Pyro lab will be transformed into a teaching facility dedicated to the most up-to-date standard tests used in the industry. We are also planning to develop a number of lab facilities for dedicated research projects.

The total cost of the renovation, including the initial set up and maintenance costs, is estimated at $1 million. We have secured two-thirds of the amount thus far! This is extraordinary, since we are just starting our development work...
to acquire the resources needed for this endeavor. We are looking into the possibility of including teaching elements in the renovation that will aid in student learning.

**Corporate support of the J.M. Patterson Building renovation**

Approximately two years ago, the Department of Fire Protection Engineering embarked on a “silent” campaign for corporate support of the J.M. Patterson Building renovation project. This campaign was introduced at the alumni dinner held in conjunction with the National Fire Protection Association (NFPA) annual meeting in Salt Lake City. Within weeks of this introductory meeting, Koffel Associates, Inc., pledged $50,000 in support of the new fire standards laboratory to be included in the new facility. Since this first pledge of corporate support, the response of our other corporate sponsors has been outstanding.

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<tr>
<th>Sponsor</th>
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<td>CCI</td>
<td>Classroom</td>
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<td>RJA Group</td>
<td>Fire Laboratory</td>
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<td>Schirmer Engineering</td>
<td>Conference room</td>
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<td>Koffel Associates</td>
<td>Fire Standards Lab</td>
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<td>Underwriters Laboratories</td>
<td>Fire Modeling Lab</td>
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<td>BFPE International</td>
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Nariman Farvardin, dean of the A. James Clark School of Engineering, has also pledged additional support in the amount of $170,000 for the renovation project. This support was motivated in part by the in-kind contribution of the fire alarm system in the new Jeong H. Kim Engineering Building by GE-Security (formerly Edwards Systems Technologies). GE-Security is also donating fire alarm equipment for the J.M. Patterson renovation, while Marrioff is donating a water mist system for the new office area.

In addition to these pledges, we want to acknowledge the annual support being provided by the founding members of the FIRE Center. These founding members currently include: Combustion Science and Engineering; Gypsum Association; Hughes Associates; NFPA; RJA Group; and Schirmer Engineering. In recognition of this vital support for our students, the graduate student office area in the new FPE Office will be named for the FIRE Center and the names of current founding members will be included on the doorway to the FIRE Center offices. Companies interested in supporting students through the FIRE Center should contact Fred Mowrer (fmowrer@umd.edu or 301.405.3994) for more information.

We are still seeking corporate support for a number of other spaces in the new facility. These spaces include a number of bench-scale lab facilities, a suppression lab and a diagnostics lab. If you are interested in discussing these opportunities, contact Fred Mowrer or Radka Nebesky (radka@umd.edu or 301.405.8072) for more information.

**From the Chair**

**Exciting times in Fire Protection Engineering**

We are on the move! The Department went through the University of Maryland’s budget restrictions of the past few years with relentless determination to improve and grow in spite of the financial difficulties. This has been a shared vision of the faculty, staff and students. With the unwavering support of alumni and friends we are seeing outstanding results:

- **Jim Quintiere** has been elected a Fellow of the American Society of Mechanical Engineers for his significant contributions to the K-11 Fire and Combustion Technical Committee of the Heat Transfer Division. This recognition has been long overdue!
- We have launched into a relocation project, moving the department with all its facilities to the penthouse of the J.M. Patterson building. This new location provides extraordinary visibility for the department and enjoys the proximity of the new Jeong H. Kim Engineering Building.
- The department will celebrate its 50th anniversary from Oct. 13–15, 2006 with a weekend of events culminating in a gala dinner in the Riggs Alumni Center. Details are on the back cover of this newsletter.

These are some of the major highlights. Let me review the progress and the future challenges along the various aspects of our strategic plan.
Education and outreach

- We successfully obtained a full six years of ABET accreditation last October. We gratefully acknowledge our Undergraduate Curriculum Advisory Committee. The contributions of David Icove and the committee members continue to be a phenomenal asset in this process.

- Thanks to Jim Milke, undergraduate enrollment is growing steadily—116 enrolled students at this writing. The enrollment in the M.S. program is steady at 24 students and we now have more than 12 Ph.D. students.

- Dr. Nathasak Boonmee received his Ph.D. under the direction of Jim Quintiere and has joined the faculty of the Kasetsart University in Bangkok, Thailand. His dissertation describes his seminal contribution to modeling of wood autoignition.

- Dr. Yi Wang received his Ph.D. under the direction of Arnaud Trouve. He has joined Risk Management Solutions in California. His work on direct numerical simulation of flame wall interactions opens the way for a better understanding and modeling of flame spread and structural fire protection.

- Dr. Xiaobo Yao received his Ph.D. under the direction of André Marshall. His work resulted in a new engineering heat transfer models for ceiling jet from fires. He made extensive use of physical modeling concepts and laser diagnostics.

- The distance learning program leading to the Professional Master degree is progressing through the development phase. We are at steady state with two offerings per quarter. The program now includes the full complement of 10 courses. We are planning an intensive marketing campaign, increasing enrollment to more than 160 class seats per year. Thirty-two bachelor’s degrees were awarded in May 2006.

Research

- Our total research awards this past year jumped to an unprecedented high. This is due to a major award for the Center for Firefighter Safety Research and Development. The center operates in conjunction with the Maryland Fire and Rescue Institute and is devoted to enhancing the safety and performance of first responders by addressing their needs through technology innovation. These include advances in communication, physiology, information management, real-time fire simulation and virtual training.

- Research expenditures have grown from $483,567 in FY01; to $633,671 in FY02; to $664,809 in FY03; to $947,842; in FY04 to $1,049,308 in FY05. So far in FY06, expenditures are $2,132,201. We now generate more than three times our state budget in research expenditures. This is well on par with the average at the A. James Clark School of Engineering.

External relations

- The FIRE Center has grown to six full members with the addition of Schirmer Engineering and the RJA Group. They join Combustion Science and Engineering, Inc.; Gypsum Association; Hughes Associates, Inc.; and NFPA. Among associate members we list the support of GE-Security, Honeywell Fire Solutions Group, Koffel Associates, Inc., and Reliable Sprinklers Co. We are deeply indebted to the generous contributions that support our graduate and undergraduate students. Some of the funds raised are instrumental to student recruitment and departmental publications.

- We have had several opportunities to get together with our alumni in the past year. Most notable was our recent gathering in Las Vegas where more than 100 people attended the alumni dinner. Our other gatherings were also well attended and our gratitude goes to the local organizers for their dedication.

I am completing my first term as chair and looking forward to my second. I am amazed at how far we have come in these past five years. The extraordinary efforts of faculty, staff, students, alumni and friends have transformed the department into a major player within the A. James Clark School of Engineering and within the fire science research community. We have kept our strong commitment to the profession and to the growth of our undergraduate program.

Four years ago, we titled our strategic plan: “Excellence from the synthesis of heritage and innovation.” I am proud to report that we have fulfilled this goal beyond our wildest imagination.

—Marino di Marzo, Professor and Chair

Calendar

June 6, 2006
FPE Alumni Dinner
NFPA Conference, Orlando, Fla.

50th Anniversary Celebration

Oct. 15–20, 2006
SFPE Professional Development Conference and Exposition
Turf Valley Resort, Ellicott City, Md.

Learn new developments in fire protection engineering technology. The Society of Fire Protection Engineers (SFPE) Annual Meeting, a one-day free event, allows attendees to hear and influence the direction of the society. It also features technical presentations for fire protection engineers. Following the annual meeting are a series of seminars taught by professionals and a symposium, “Partners for Protection: Fire Protection Engineers and the Fire Service.” For more details, visit www.sfpe.org or contact Julie Gordon at (301) 718-2910 ext. 104.

FIRE PROTECTION ENGINEERING DEPARTMENT
Remembering Frank Brannigan

by Chris Brannigan

The Brannigan family appreciates all the wonderful tributes that have been written for my father. It helps to know so many people share our loss. Since most people only knew the fire service legend, I thought I’d write about the patriarch of a clan, one that can easily fill a charter bus, with dozens of wild Irish voices shouting out their favorite stories about Dad and Grandpa.

My parents were born in Manhattan. Dad graduated early from two demanding schools; Regis High School at age 15, and Manhattan College at 19. He and my mother Maurine met in high school and dated for years. She graduated from Hunter College and after Pearl Harbor, became USN Ensign Romkey.

Enlisting as a seaman, my dad rose to become Lt. Commander Brannigan, Fire Marshal of the 5th Naval District. However, my mother never let him forget who had been first commissioned an officer.

They married in 1944 and had seven children. My sisters were educated to be fearless, conquer the world and choose smart men who cooked. It worked. We brothers were taught to be scholars who cooked and cleaned like sailors, in the hope that some smart woman would tolerate us. That worked too.

My dad led a family construction crew to enlarge our small Bethesda home. After 10 years, we each had our own room. We dug out a crawl space with shovels and buckets. My dad completed all carpentry, electrical, plumbing, HVAC, drywall, tile, and painting in that mammoth basement. He remodeled the whole house, then laid weathered brick patios around the backyard terrace that had once been basement fill dirt. Before 1960, he soldered and hung bare copper pipes and sprinklers in almost every space. My mother drew the line at the living room. He installed seatbelts in our family station wagon in 1962, the only time I ever saw him work on an automobile.

My dad wore flashy vests, berets, and bolo ties; sang loud, often and well; and favored Broadway show tunes, Irish tenors, and military brass band records. He was the family cook. His father had managed a grocery store in Manhattan, and he loved shopping, cooking and taking us to restaurants. His favorite event was a party full of friends and family.

Between full-time safety work at the Atomic Energy Commission and part-time fire service teaching, he never took a non-working vacation. He loved to travel, and took us along whenever he could. We visited firehouses from New York to San Francisco, and we felt welcome wherever we went. We spent every summer at Norfolk while he taught shipboard firefighting on the naval base. There was a fire radio on at all times in every house and car and turnout coat my dad owned. Only my mother could make him turn them down or off.

He was proud of all of us, our spouses, our children and their children. He was proud of my brother’s (Prof. Vince Brannigan) leadership role in building a university graduate program in fire protection engineering. He was generous with praise for my own modest contribution of illustrations for BCFS.

My father’s personal treasure was when a firefighter would tell him how someone survived because they remembered a warning he’d spread about a fatal hazard. He often said he’d seen too many funerals with crossed ladders. He loved firefighters and their families. He saw fire, physics and gravity as the enemies that tried to stop them as they risked their lives to save strangers. Because he saw their selfless courage as the most noble of virtues, he devoted his life to their survival. His highest regard was for the sailor on a burning ship, facing certain death, armed only with a firehose.

The poem on the wall of his office was by Domingo Ortega. “Bullfight critics ranked in rows; crowd the enormous plaza full; but only one is there who knows; and he’s the man who fights the bull.” He loved all Irish literature and poetry, but the poetry he wrote was my mother’s favorite. He wrote a poem for her every year on her birthday. An old love note from her to him says, “I love you because you are the stuff that saints are made of.”

On his last day, he got up early and cooked their breakfast. Then he lay down and went to sleep. He taught his most important lesson by example every day of his life. He was a good person, he loved his family, and he accomplished his mission.

The Department of Fire Protection Engineering is seeking donations to establish a scholarship endowment in memory of Frank Brannigan. If you are interested in supporting this scholarship, please write checks to the University of Maryland College Park Foundation and note “Frank Brannigan Scholarship” on the memo line. Send to:

Radka Z. Nebesky, Associate Director of Development
A. James Clark School of Engineering
3214 Jeong H. Kim Engineering Building
University of Maryland
College Park, MD 20742–2831
Contact Radka Nebesky at 301.405.8072; radka@umd.edu.
The A. James Clark School of Engineering at the University of Maryland is consistently highly rated among the elite engineering schools in the nation, and its prominence, importance, and value of its degrees are rapidly growing. The Department of Fire Protection Engineering is the only four-year, ABET-accredited bachelor of science curriculum in fire protection engineering in the United States, and serves as a fountainhead for the supply of exceptional fire protection engineering leaders throughout the world.

The profession of fire protection engineering is a crucial and rapidly growing expression of service to humanity. It appeals to people who wish to use their engineering skills, their analytical abilities, and their spirit of public service to leave a significant positive legacy. Fire protection engineers make a substantial difference during their professional lifetimes by designing engineered solutions to critical problems and saving the lives of people whose names they may never know.

Last fall one of the largest freshman classes ever (16 students) entered the University of Maryland to study fire protection engineering. Eleven students graduated in December 2005; currently we have 110 undergraduate students enrolled in the major.

Starting in Fall 2004, a semester lab project was incorporated into ENFP 320, “Fire Risk Assessment Methods and Laboratory.” In the first year, the project involved the use of a 1/20th scale model to explore fire behavior in the 96th floor of the North Tower of the World Trade Center. Feedback on the project was outstanding and was documented in feature articles in the Diamondback student newspaper and the Clark School’s E@M magazine. This past fall, the semester project for the ENFP 320 class was a small-scale version of the 2003 fire at The Station nightclub in Rhode Island.

Robert Gagnon and Joe Simone provided valuable assistance in teaching the undergraduate design courses. Special appreciation is also extended to the mentors for the Fire Alarm and Special Hazards Design course from this and last spring, including Mike Bove, William Dumayas, Tyler Mosman, Joe Navarra, Scott Panowitz, Mike Reardon, Joe Simone, Chris Scheer, and John White. The Department and students also appreciate the special lectures on fire pumps presented by Ken Isman and the Fire Alarm Seminar provided by Gary Girouard, Millard Holmes, and Jason Miller of SimplexGrinnell. In addition, we continue to benefit from guest lectures from alumni and professionals in several classes.

Scholarship support for department students continues to be substantial. Recruiting scholarships for freshmen and sophomore students have been a significant factor in attracting new students into the department. This spring, 31 of our 110 undergraduates receive scholarship support at some level. We appreciate the generosity and strong commitment from our sponsoring organizations for the department and our students.

Robert M. Gagnon Scholarship endowed; 21st and 22nd awarded

Robert M. Gagnon, P.E., SET, FSFPE, president of Gagnon Engineering, is endowing the Robert M. Gagnon Scholarship. He is designating a percentage of his IRA to provide a minimum of $50,000 to the University of Maryland College Park Foundation, ensuring the scholarship is awarded in perpetuity.

Gagnon founded the scholarship as an annual award in 1993, and has since supported over 20 students. Christopher Moran and Katherine Beling are the 21st and 22nd recipients.

The scholarship’s mission is to provide recognition and assistance to deserving junior and senior undergraduate Fire Protection Engineering students who show great promise for leadership, display unusual dedication to the profession of fire protection engineering, and possess exceptional aptitude and interest in fire suppression and detection system design.

Katherine Beling

Katherine Beling is a junior who has made both the Clark School and national dean’s lists.

Katherine says, “I had always been good at mathematics, and I enjoyed the science courses. It seemed only natural that I should pick engineering. Fire protection engineering is a career where what I do directly impacts other people’s lives in an incredibly positive way. I will be able to directly work in a field dedicated to saving lives, and will be engaged in studying some of the most interesting topics in engineering. In addition, my father, grandfather and great-grandfather were all employed by the Baltimore City Fire Department.”

Christopher Moran

Junior Christopher Moran has received the Robert J. Taylor award. He is a member of the Gemstone Program, part of the University Honors Program, and the Society of Fire Protection Engineers. He is working with a research team to create a fire index scale that can be applied to campus dorm rooms, has...
Past Award Recipients

Recipients of the Robert M. Gagnon Endowed Scholarship are outstanding engineers and exemplary citizens who personify great character and a dedication to make the world a better place for future generations. Past winners include Anthony Militello, PE; Stephen M. Hill, PE; Michael J. Baker; Andrew Schneider; Amy Jean McGarry; Steven Stege; Tershia Pinder; Daniel Layou; Jaime Ferrino; David Wilmot; Lucas Kirn; James Carroll; Charles Thomas Joyce; Bryan Hoskins; Justin Reid; Kyle Lehman; Alan Kouchinsky; and Kathryn Mead Allan.

If you are interested in supporting the Robert M. Gagnon Endowed Scholarship, please contact Radka Nebesky, associate director of development, at 301.405.8072 or radka@umd.edu.

BFPE International establishes a new scholarship

BFPE International has made a five-year, $15,000 pledge to establish the James and Pamela Boyer BFPE International Fire Safety and Security Scholarship in honor of its founders James and Pamela Boyer. The scholarship will support undergraduate students in the department who have financial need.

James L. Boyer founded Baltimore Fire Protection and Equipment Co. in 1970, with a $1,000 loan from his grandmother. Initially he ran the company out of her basement and carried equipment in an old milk truck. Jim sold fire systems during the day and installed them in the evening.

In 1989 the company name was changed to BFPE International when Jim purchased offices out of state. The corporate office relocated to a new 10,000 square foot facility in Hanover, Md. The company had grown from one to 120 employees, had $5 million annually in sales, and had three offices. During this time, Jim was joined in the business by his wife Pam, who was vice president.

After Jim passed away in 1992, Ms. Boyer became the president of BFPE. Under Pam’s guidance, the company has grown to more than 450 employees, has nine offices from Pennsylvania to South Carolina, and has sales of more than $50 million annually.
Scholarship awards

Katherine Allan........ Wells Fund Scholarship
Kirsten Babin................ Hughes Associates Scholarship
Katherine Beling........ Hughes Associates Scholarship
                        Robert M. Gagnon Centennial Scholarship
Alyson Blair.......... Hughes Associates Scholarship
Justin Bonny.......... Schirmer Engineering Corporation Scholarship
Richard Bowie.......... Schirmer Engineering Corporation Recruiting Scholarship
Tiffney Cates......... Honeywell Fire Solutions Group Scholarship
Michael Connolly.... Roger R. Cholin Scholarship
Jacob Deutchman.... Richard G. Gewain Scholarship
Jonathan Evans........ Schirmer Engineering Corporation Scholarship
Jessica Hubert........ GE Industrial Security Group Scholarship
                        Sarah B. Bryan Scholarship
John Kaminski........ Philip L. DeCamara, Jr. Memorial Award
Jeff Keslin.......... Schirmer Engineering Corporation Scholarship
Alan Kouchinsky...... Philip L. DeCamara, Jr. Memorial Award
Kyle Lehman.......... Honeywell Fire Solutions Group Scholarship
Danielle Leikach...... GE Industrial Security Group Scholarship
                        Hughes Associates Scholarship
Christopher Mealy .... Hughes Associates Scholarship
Megan Meinert .......... Sarah B. Bryan Scholarship
Christopher Moran..... Honeywell Fire Solutions Group Scholarship
                        Robert M. Gagnon Centennial Scholarship
P. Alex Munguia....... Hughes Associates Scholarship
Tina Myers.............. GE Industrial Security Group Scholarship
Andrew Neviackas...... Frank J. Fee, Jr. Award
                        Salamander Scholarship
Evan Patronik.......... Honeywell Fire Solutions Group Scholarship
Lawrence Phillips..... Hughes Associates Scholarship
Brian Rubeling........ Frank J. Fee, Jr. Award
Thivanka Seneviratne ... Hughes Associates Scholarship
Adam St. John.......... RJA Group Award
Ryan Travers........... Hughes Associates Scholarship
Usha Tyson............. RJA Group Award
Steven Venditti........ Kemper Foundation Scholarship
Andrew Welter.......... Wells Fund Scholarship
Jennifer Wiley........ Robert W. Schirmer Scholarship
                        Sarah B. Bryan Scholarship
Andrew Wolfe.......... GE Industrial Security Group Scholarship
                        RJA Group Recruiting Scholarship
Ossana Wolff........ GE Industrial Security Group Scholarship

Online program graduates first master’s degrees

Sixteen working engineers received their Master’s Degree in Fire Protection Engineering this year without setting foot on campus to take their classes. Online since August 2003, the distance learning option offers web-based courses that utilize the latest technology in e-learning. Students download webcasts, notes, outlines, and presentations. They participate in online chat sessions with faculty and fellow students and e-mail questions, homework, projects and exams to the faculty. Student Kathy Kinney says “I’ve been online since the beginning, and it’s been getting better every term. We’ve learned to use the tools and now there are weekly chats and real-time interaction with the professors.”

This is no watered-down degree program; online students receive the same outstanding curriculum presented on campus.

“I don’t have to go to class two to three times a week,” Kinney says. “I think it’s an ideal way to get an advanced degree, especially with the reputation of a nationally ranked university behind me.”

Students complete 30 credits of coursework on a part-time basis (one to two courses per term; four terms per year). There is no research component, no thesis or scholarly paper, and no comprehensive exam. More than 60 students are currently in the online program. Fire protection engineering is a fast-growing field and professionals are increasingly in demand. Learn more about this innovative program at www.fpe.umd.edu.

Graduates of the online Master of Engineering in Fire Protection Engineering

Barry Badders               Rodney Barnes
Tomas Fernandez             Lalit Gabhane
Elaine Gall                 Pisonth Keyuravong
Kathryn Kinney              Robert Layton
Jeffrey McBride             Steven McCawley
Gregory Myers               William Reilly
Charles Smith               John Stauder
Richard Straney             Kelvin Wong
Fire Protection Engineering turns 50!

The Department of Fire Protection Engineering will celebrate its 50th anniversary during the 2006–2007 academic year. To commemorate this special time, we are planning a weekend full of activities including the ribbon cutting for the new facility in the J.M. Patterson Building. The weekend will culminate with a gala dinner in the Riggs Alumni Center, spearheaded by Moriel Kaplan, P.E. Art Cote will be the Master of Ceremonies. Don’t miss this opportunity to reminisce with old friends and make new ones! Please join us Oct. 13–15, 2006 to celebrate how far we have come and how much we have grown. Guests are invited! Sponsorship opportunities are available; for more information, visit www.fpe.umd.edu.

FPE 50th anniversary celebration activities

**Friday, October 13**
- 3:00 p.m. Hotel check-in and event registration begins at the Greenbelt Marriott in Greenbelt, Md.
- 6:00 p.m. Informal happy hour

**Saturday, October 14**
- 10:00 a.m. Tour of new fire protection department space
- 11:00 a.m. Dedication Ceremony
- 12:30 p.m. Lunch
- 1:30 p.m. Roundtable discussion on FPE education
- 6:30 p.m. 50th Anniversary Gala

**Sunday, October 15**
- Morning Possible golf tournament
- Afternoon Beginning of SFPE Professional Development Seminar in Ellicott City, Md.

**Hotel information**

**Greenbelt Marriott**
6400 Ivy Lane
Greenbelt, MD 20770
(301) 441–3700 or (800) 676–5975

Please call the number above to make a reservation. Mention that you will be attending the Fire Protection Engineering 50th anniversary to get the group rate of $129 per room.

For more information or to register online, please go to: www.stayatmarriott.com/fireprotection/

Please reserve your room as soon as possible to ensure availability and the special rate!